## REMARKS

Claims 3-12 and 15 are pending in the application; new claim 15 has been added.

**Rejection under 35 U.S.C. 102/103**

Claims 1-3 and 6-12 stand rejected under 35 U.S.C. 102(b) as being anticipated by *Murray (US 2002/0069937)*.

In the alternative, the claims 1-3 and 6-12 stand rejected under 35 USC 103 over *Murray (US 2002/0069937)* in view of *US 6,308,603 (Murray)*. This is not clearly set forth on page 3 of the office action but appears to be examiner's intended rejection when looking at page 5, last paragraph.

Claim 1 has been canceled and new independent claim 15 is submitted herewith.

Claim 15 discloses a method for sawing pieces of wood in a sawing station, the method comprising the following steps:

a) measuring the pieces of wood in a measuring station;

b) sequentially transporting the pieces of wood on a transport device from the measuring station to a sawing station and scanning a position of each of the pieces of wood during transport from the measuring station to the sawing station and sending input signals of the scanned position to a control unit;

c) cutting the pieces of wood in the sawing station into at least two sections based on measured results taken in the step a) and monitoring a saw position of a saw of the sawing station and sending input signals of the saw position to the control unit;

d) recalculating and adjusting, based on the input signals of step b) and step c), a feeding velocity of the pieces of wood during transport according to step b) such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut.

The features of steps c) and d) are disclosed in paragraphs 0029 and 0030 of the instant specification.

According to the method of the present invention, the feeding velocity of each trailing piece of wood is recalculated and adjusted, based on the scanned position of the

pieces of wood and the saw position of the saw, such that the piece of wood enters the sawing station without contacting the piece of wood that is still in the sawing station but in such a way that the distance between these two pieces of wood is minimized. The feeding velocity of the trailing piece of wood is variably controlled and the feeding velocity is computed continuously anew within the control unit based on the input signals. The feeding velocity is thus optimized and a very high number of pieces of wood can be processed within a unit of time.

The cited reference *Murray (US 2002/0069937)* discloses a method and an apparatus for bucksawing logs. The logs are moved past scanners 56, 57 that determine their length. After the logs have been measured by means of the scanners 56, 57, the logs are laterally moved by device 59 onto an another conveyer 14 that is arranged between the two transport devices 55, 60; 54, 62. The logs are alternatingly pushed from one or the other transport device 55, 60; 54, 62 onto the centrally arranged conveyer 14. Upstream of the sawing station there is a photocell 28 and downstream of the sawing station behind the cut-off saw 26 there is another photocell 29. The photocells 28, 29 provide a signal to a central processing unit that controls the operation of the rolls 178, 19, side roll 20, press roll 21, and pivot arm 27 of the saw (paragraph 0037). As soon as the logs pass the photocell 28, the rolls 18 through 21 for transporting the logs are switched on. The rolls 20, 21 are pivoted by means of arms 22, 23 inwardly until the rolls 20, 21 engage the log. The photocell 29 stops the drive action of the rolls 18 to 21 as soon as the log has reached a position for performing a sawing cut in the sawing station.

Even though *Murray* indicates that the conveyor 14 can be continuously driven while the rolls 18 to 21 are stopped in order to reduce gaps between the individual logs, there are no steps disclosed according to which:

the position of each of the pieces of wood during transport from the measuring station to the sawing station is scanned and an input signal of the scanned position is sent to a control unit;

the saw position of the saw of the sawing station is monitored and input signals of the saw position are sent to the control unit;

the velocity of the pieces of wood during transport from the measuring station to the

sawing station is recalculated and adjusted, based on the input signals of the scanned position and the saw position, such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut.

The reference does not teach a recalculation and adjustment of the velocity of the pieces of wood as they are transported to the sawing station based on the scanned position and the saw position. The prior art only discloses that a controller (computer) controls the operation of the rolls 18 to 21 (on/off) and of the saw pivot arm 27 as the log enters or leaves the sawing station, but the controller does not control the feeding speed for transporting logs to the sawing station. The controller only deals with the actual bucking operation. Even though a variable speed of the infeed and outfeed conveyors is taught (1st sentence of paragraph 0038), there is no disclosure in regard to controlling the speed based on the scanned position and the saw position; the only disclosure as regards "variable" is that the infeed conveyor can be operated in stop-and-go operation (paragraph 0041) in coordination with the feed rolls 18-21.

Claim 15 is therefore not anticipated or obvious in view of *Murray (US 2002/0069937)*.

The combination of *Murray (US 2002/0069937)* and *US 6,308,603 (Murray)* cannot make obvious the invention as claimed in claim 15. *US 6,308,603 (Murray)* and *Murray (US 2002/0069937)* disclose essentially the same devices. *Murray (US 6,308,603)* has been cited by the examiner to show that it is undesirable to have large gaps between the logs and that it is therefore obvious to reduce the gaps in oder to make operation more efficient. The principle of operation is however the same as the disclosed in *Murray (US 2002/0069937*). Therefore, the combination of the two references cannot make obvious that:

the position of each of the pieces of wood during transport on the transport device from the measuring station to the sawing station is scanned and an input signal of the scanned position is sent to a control unit;

the saw position of the saw of the sawing station is monitored and input signals of

the saw position are sent to the control unit;

the feeding velocity of the pieces of wood during transport from the measuring station to the sawing station is recalculated and adjusted, based on the input signals of the scanned position and the saw position, such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut.

Claim 15 is therefore not obvious in view of the combination of *Murray (US 2002/0069937)* and *US 6,308,603 (Murray)* .

**Rejection under 35 U.S.C. 103**

Claims 4 and 5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Murray (US 2002/0069937)* and *Bolton et al. (US 4,934,228).*

In view of the arguments presented above, claim 15 is believed to be allowable and claims 4 and 5 should be allowable as dependent claims.

Claims 13 and 14 stand rejected under 35 USC 103(a) as being unpatentable over *Murray (US 6,308,603)* in view of *Wurtzer and Dietz (DE 4327040)*.

Claims 13 and 14 have been canceled.

New claim 15 is believed to define over the combination of reference *Murray / Wurtzer and Dietz. Murray (US 6,308,603)* discloses logs being moved past scanners 56, 57 that determine their length. After the logs have been measured by means of the scanners 56, 57, the logs are laterally moved by device 59 onto an another conveyer 14 that is arranged between the two transport devices 55, 60; 54, 62. The logs are alternatingly pushed from one or the other transport device 55, 60; 54, 62 onto the centrally arranged conveyer 14. Upstream of the sawing station there is a photocell 28 and downstream of the sawing station behind the cut-off saw 26 there is another photocell 29. The photocells 28, 29 provide a signal to a central processing unit that controls the operation of the rolls 178, 19, side roll 20, press roll 21, and pivot arm 27 of the saw (paragraph 0037). As soon as the logs pass the photocell 28, the rolls 18 through 21 for transporting the logs are switched on. The rolls 20, 21 are pivoted by means of their arms 22, 23 inwardly until the rolls 20, 21 engage the log. The photocell 29 stops the drive

action of the rolls 18 to 21 as soon as the log has reached a position for performing a sawing cut in the sawing station.

*Murray* does not discloses steps according to which:

the position of each of the pieces of wood during transport on a transport device from the measuring station to the sawing station is scanned and an input signal of the scanned position is sent to a control unit;

the saw position of the saw of the sawing station is monitored and input signals of the saw position are sent to the control unit;

the feeding velocity of the pieces of wood during transport from the measuring station to the sawing station is recalculated and adjusted, based on the input signals of the scanned position and the saw position, such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut.

The reference does not teach a recalculation and adjustment of the feeding velocity of the pieces of wood as they are transported to the sawing station based on the scanned position and the saw position. The prior art only discloses that a controller (computer) controls the operation of the rolls 18 to 21 (on/off) and of the saw pivot arm 27 as the log enters or leaves the sawing station, but the controller does not control the transport of logs to the sawing station. As set forth in col. 4, lines 30-36, the infeed conveyor continues to feed during the intervals when the rolls 18, 20, 21 are stopped for the bucking operation - there is no control of the feeding velocity on the transport device.

The reference *Wurtzer and Dietz* discloses a program control device 38 that is only schematically indicated (col. 4, lines 23-27). This text portion reads in translation:

"*For controlling all components of the conveying device 10 a program control device 38, illustrated only very schematically in Fig. 2, is provided whose inner construction and external wiring are not shown so as not to clutter the drawing.*"

The control device is referenced once more in col. 5, lines 56-60:

*"The first and the second holding-down rolls 30a, 30b are no longer in engagement with board 13b at this time and have already been pivoted upwardly by means of the*

*program control device 38, as indicated by arrows 33'."*

The last reference (aside from claim being claimed in 1) to the program control device can be found in col. 6, lines 25-31 (emphasis in bold added):

*"By means of a* ***suitable time control*** *of the various conveying components by means of the program control device 38 it can be achieved that the distance in the transport direction between the trailing ends 131 of the temporally leading boards to the leading ends 130 of the following boards can be adjusted to be as small as desired, in an extreme case even zero."*

The translations of the above referenced text portions have been done by the undersigned who is fluent in the German and English languages. The undersigned herewith certifies that the translations are true and accurate.

The reference does not set forth details as regards the control action, and the only teaching to be derived is that the components of the conveying device are to be controlled in certain temporal sequences. Thus, the control device controls the function of the various elements or components in accordance with a programmed time schedule; the temporal sequence can be programmed such that the boards follow one another even at zero spacing. However, such a time control of components cannot suggest that the position of each of the pieces of wood during transport from the measuring station to the sawing station is scanned and an input signal of the scanned position is sent to a control unit; that the saw position of the saw of the sawing station is monitored and input signals of the saw position are sent to the control unit; and that the feeding velocity of the pieces of wood during transport from the measuring station to the sawing station is recalculated and adjusted, based on the input signals of the scanned position and the saw position, such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut. The prior art reference nowhere discloses that a feeding speed is adjusted based on input signals of scanned position of the pieces of wood and the saw position.

Claim 15 is therefore also not obvious in view of *Murray (US 6,308,603)* in view of

*Wurtzer and Dietz (DE 4327040)*.

## CONCLUSION

In view of the foregoing, it is submitted that this application is now in condition for allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on May 23, 2007,

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